

3rd World Congress on

October 01-02, 2018 Osaka, Japan

Predicting onset and remission of infantile spasms by pairing clinical signs and a disease biomarker CSF-GABA

Stephenson W Nkinin
University of Cincinnati, USA

Background: Infantile spasms (IS) is a severe form of epilepsy that occurs in the first year of life. It is characterized by clusters of brief, repetitive spasms, often associated with hypsarrhythmia on EEG. The pathogenesis of IS is unclear, but it is thought to be related to abnormal excitatory-inhibitory balance in the developing brain. GABA is the primary inhibitory neurotransmitter in the brain, and its levels in CSF have been shown to be elevated in IS. We hypothesized that CSF-GABA levels could be used as a biomarker to predict the onset and remission of IS. We conducted a retrospective study of 16 children with IS, comparing CSF-GABA levels at the time of onset and remission. We found that CSF-GABA levels were significantly higher at onset ($P=3.44 \times 10^{-12}$) and lower at remission ($P=4.3 \times 10^{-4}$). These findings suggest that CSF-GABA levels could be used as a biomarker to predict the onset and remission of IS.

Methods: We conducted a retrospective study of 16 children with IS. CSF-GABA levels were measured at the time of onset and remission. We compared CSF-GABA levels at onset and remission using a paired t-test.

Results: CSF-GABA levels were significantly higher at onset ($P=3.44 \times 10^{-12}$) and lower at remission ($P=4.3 \times 10^{-4}$). These findings suggest that CSF-GABA levels could be used as a biomarker to predict the onset and remission of IS.

Conclusion: CSF-GABA levels could be used as a biomarker to predict the onset and remission of IS.

Biography

Stephenson W Nkinin is an Adjunct Professor of Microbiology at the university of Cincinnati Department of Biology. He is currently pursuing his MPH (Epidemiology) in the department of Environmental Health, University of Cincinnati. Prior to registering in the MPH program, He was a Research Associate Scientist at the Pathology/Clinical Mass Spectrometry Department at Cincinnati Children's Hospital.

nkininsw@mail.uc.edu

Notes: